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PATENT COOPERATION TREATY



PCT 10/535411

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PA1692WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/FR2003/003548	International filing date (day/month/year) 02 décembre 2003 (02.12.2003)	Priority date (day/month/year) 03 décembre 2002 (03.12.2002)
International Patent Classification (IPC) or national classification and IPC G11B 7/24		
Applicant COMMISSARIAT A L'ENERGIE ATOMIQUE		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 14 juin 2004 (14.06.2004)	Date of completion of this report 25 February 2005 (25.02.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/FR2003/003548

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
 pages _____ 1-8 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the claims:
 pages _____ 1-11 _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the drawings:
 pages _____ 1/1 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International Application No.

PCT/FR 03/03548

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-11	YES
	Claims		NO
Inventive step (IS)	Claims	1-11	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO

2. Citations and explanations

1. Reference is made to the following documents:

D1: EP-A-1 054 393 (EASTMAN KODAK CO)

22 November 2000 (2000-11-22);

D2: US-A-4 969 141 (TAKAOKA TAKASHI ET AL)

6 November 1990 (1990-11-06);

D3: FR-A-2 809 856 (COMMISSARIAT ENERGIE ATOMIQUE)

7 December 2001 (2001-12-07);

D4: US-A-4 214 249 (ENDO KIYONOBU ET AL)

22 July 1980 (1980-07-22).

2. The inorganic material as per the invention (claim 1) is defined only by the fact that it "can be deformed when exposed to optical radiation". According to the French language dictionary *Le Petit Larousse*, the definition of a deformation is a change in shape or appearance.

Nevertheless, claim 1 does not specify the type of deformation to which the active layer is subjected. As a result, said deformation can be interpreted as

being a change in appearance, as is the case with the phase-change material used in the inventions as per D1 and D2 where the appearance of the amorphous structure is different to the appearance of the crystalline structure.

However, it is very clear from the description of the present application (see page 4, lines 9 and 10) that reference is being made to a mechanical deformation in the form of holes or bubbles.

As a result, claim 1 is not clear and does not fulfil the requirement of clarity of PCT Article 6.

3. Throughout the rest of the examination, it has been considered that the term "deformation" refers to a mechanical deformation as defined in the description. If this were not the case, claims 1 and 3 would not be novel over the content of D1 (see page 2, line 50 to page 3, line 33) or the content of D2 (see the abstract and claim 1) because said documents disclose an optical recording medium having a phase-change active layer (i.e. a layer that undergoes a change in appearance) on an additional metal layer.
4. If the deformation of the active layer is defined as being a mechanical deformation (change in shape), then the subject matter of claims 1 to 11 is not disclosed or suggested in the available prior art because D1 and D2 define only phase-change recording materials. D3 and D4, on the other hand, define inorganic materials that are mechanically deformed (holes or bubbles) but do not at all suggest the use of an additional metal layer as a heat dissipation

layer under the active layer.

For these reasons, if the nature of the deformation were specified in claim 1, claims 1 to 11 would fulfil the requirements of novelty and inventive step of PCT Article 33(2) and 33(3).

5. Dependent claim 9 is not clear (PCT Article 6) because it is inconsistent with claim 1. Indeed, if the additional metal layer is positioned on the rear surface of the active layer (see claim 1), the protective layer cannot be positioned on the rear surface (5) of the active surface as well. It should have been specified that the protective layer is positioned on the additional metal layer.
6. Contrary to the requirements of PCT Rule 5.1(a)(ii), the description does not indicate the relevant prior art disclosed in documents D3 and D4, nor does it cite said documents.

Claim 1 has been properly delimited with respect to the prior art corresponding, for example, to the content of D3.